

233 fairly large and they assist materially in fertilizing wheatfields. Wheat farmers will pay about 30 centavos a night to have an average herd bedded on their fields. This is not done for cornlands, as the return is not considered sufficient.

No sheep owner gets his living from the ownership of sheep, but in some cases individuals or even entire families live on their wages as sheepherders. Most sheepherders, however, are boys of from 8 to 20 years and old men and women. Very poor families may start their sons to learn sheep herding as apprentices as early as 6 years of age.

Ordinarily sheepherders return to town only for fiestas or when they need new clothes. Their food is taken to them by a woman in the family. If the entire family work as shepherds, the wife returns to town periodically to cook a supply of tortillas or *gordas* (thick tortilla fried in fat, sometimes made of wheat flour instead of maize).

233 The average wages of sheepherders are 5 pesos a month without food, but this evidently varies with the size of the flock. One of the larger owners, with a flock of about 200 sheep, pays 10 centavos a head a month, 1 *fanega* of maize, and permits slaughter of 1 sheep a month. In all cases, shepherds may eat sheep which die, if they think it safe to do so, but the pelt must be washed and dried, and given to the owner.

233 Shepherds watch one another to prevent misbehavior, such as secretly selling sheep, or [626] carelessness which would reflect on the profession. Shepherds care for the flocks, protect them from coyotes, and put the ownership marks on the lambs. They are aided by specially trained dogs.

Sheep are herded in the mountains part of the year, and on farm lands after the harvest. Identification marks are made by notching or [422] cutting the ears. Males are not castrated. During the dry season, numerous sheep die of starvation unless their owners have feed (usually wheat straw). Sheep are not dipped and in general receive little care beyond herding. Coyotes are the principal enemies, although a waggish informant listed the enemies of sheep as "First, the coyote; second, the shepherd; [522] and third, the man who buys him for food."

- 301 Miscellaneous cheap products of the markets may be worn, but the proper type every woman desires is a large hollow crescentic ornament with wires from each end passing through the perforation in the ear. These are of gold or silver, gold being preferred. A gold pair costs about \$35.00.
- [435]

WOODWORKING TECHNIQUES

- 335 Carpentry, including house building, is the only wood manufacturing process in Cherán except that of a single man who turns out chocolate beaters and that of a family who make broom handles. Aside from house building, carpenters mainly make doors for houses and kitchens, gates in fences, and trap doors. While several carpenters can do other kinds of woodwork, they rarely make furniture, as Cherán carpenters do not feel they can compete with those of nearby Paracho.
- 322

511 The differences in the economic well-being of towns situated only a few miles apart are sharply underscored by this situation. Paracho is a "poor" village with inadequate lands. A considerable percentage of the population gain their livelihood as hired laborers, traders, carpenters, and weavers. Furniture makers in Paracho receive ordinarily 50 centavos for a chair, which takes perhaps a day to make. Carpenters from Cherán, most of whom are also landowners, feel this is a quite inadequate return. Data from Cherán indicate carpenters receive \$1.50 or more a day for their labor. It may be that the traditional specialization of labor may have some influence upon the Cherán carpenter's unwillingness to make furniture, but differences in economic standards undoubtedly play a part.

465

- 335 Carpenters have a shop in their yard, usually consisting of a shed with one or two sides closed. Under this is a work bench of heavy planks. The tools are a saw, mallet, chisels, adz, hammer, and plane. Usually the metal parts only are purchased, and handles and plane boxes are made by the carpenter.

As the majority of Cherán houses are of wood, another important activity of carpenters is house building. Only the simplest house construction would be undertaken without the aid of a carpenter, and even the roofing of a stone or adobe structure likewise calls for a

[text continues on p. 436]

[p.61]

Sierra Tarascan

462 They may gather herbs, make embroidered women's garments or paper flowers for sale, do the marketing for the household, and also most of the selling. If a woman's husband hires out as a laborer during harvest time, she gleans behind him in the field. There is no strong feeling against a woman who in emergency helps at her husband's work; but women actually have very little spare time.

Most productive activity in the ordinary sense, then, is performed by men. Men do all farm work, look after animals for the most part, do all forestry, and make most of the manufactured articles that enter into commerce. Distant trade is also carried on by men, although they may be accompanied by their wives, and women may go to Paracho or even Uruapan to sell herbs, fruit, vegetables, bread, tamales, or other prepared foods.

463 The bulk of the population of Cherán falls into two overlapping classes, farmers and laborers. Only a small minority utilize all their labor on their own land; even smaller is the number of farmers who employ no labor. Farmers, furthermore, may be divided into landowners and tenant farmers.

464 Farmers may also be storekeepers, traders, forest workers, or artisans in their spare time. In addition, they may hire out as laborers when they have free time. Indeed, most laborers have land or at least a garden plot. The labor supply of Cherán, in fact, is inadequate, and laborers are hired from neighboring villages, especially Nahuatzen. The standard wages are 45 centavos a day, but harvest hands receive 50 centavos a day plus the right to have their wives and children glean behind them, apparently a not insignificant factor, as the proposal of several large landowners to raise the harvest wage to \$1 a day and eliminate the gleaning privilege was rejected by the workmen. Variations in wages are discussed in connection with specific activities.

462 Bearing in mind that most men have some land, the list of occupations in Cherán is extensive, as shown in the following tabulation:

463

PRODUCTIVE OCCUPATIONS

Men

Farming
Hired labor
Shoemaking (few)

463 Ritual dancing¹
 462 Sorcery

Women

Midwifery
 Domestic service (rare)
 Curing
 School teaching (rare)
 Minor church services¹
 Ritual dancing (pastorela only¹)
 Sorcery

¹ Occupations without pay; some involving outlay of money to participate. Women's household duties are not listed. Elsewhere the distribution of women's time is discussed (p. 107).

565 Information from day laborers on the whole
 464 was unsatisfactory. Not only are they sensitive about their position, but there is some condescension toward them on the part of landowners despite the lack of explicitly drawn class lines. When an older man jestingly suggested that one of our local assistants should get in practice to carry a harvest basket, the young man replied that he didn't intend to carry a harvest basket, or plow either. "That is what you have *peons* for," he said.

465 Information about day laborers indicated a return of from 40 to 50 centavos a day, depending on season and labor. Some workers also do work by the job. Men employed to thresh wheat will sometimes get about 1½ centavos a liter. The most accurate-sounding informant, a man from Nahuatzen, estimated he could thresh 80 liters a day, a return of about \$1.20 a day. This seems high, but one informant produced estimates which would have him earning \$25 a day.²¹

464 Unemployment for laborers usually comes about the same time as the slack season for farmers, January and July. Often workers will take a vacation in this period. The more energetic will seek work at this time—bring in building stones, work in the woods, try for odd jobs about town, bring in firewood for themselves or for sale, or fatten a pig for sale. One of the storekeepers evidently will pay \$2.50 a dozen for building stones delivered at his store
 [465] for later resale. Pine firewood can be sold
 [435] usually at four sticks for 1 centavo, oak at three sticks for 1 centavo.

²¹ In Angahuan, Rendón found similar situations. Building fences pays 80 centavos a day without meals. Other field work, however, is never paid in money. Harvest workers receive three *medidas* of maize, and breakfast and dinner. Ox-team drivers receive two *medidas* of maize and meals.

Low as wages are, Rendón collected an account which indicates that wages were only 12 centavos a day within the lifetime of elderly men. The informant stated that he preferred to work at Nahuatzen because meals were included in the wage, which is not the case in Cherán. This requires verification, as Nahuatzen normally has a larger labor supply than Cherán.

In addition to paid labor or labor for one's own account, men are required to perform certain public services. These include maintenance of the aqueduct and improvement of roads and trails. Young men may also be required to do certain work in connection with fiestas, particularly the fiesta of the patron saint and the Day of the Dead. There is also obligatory assistance of relatives in connection with ceremonials and house moving. These requirements are dealt with later.

No data were secured on the relation between labor demand and labor supply. As indicated by the presence of labor from other towns at some seasons, it is believed that at peak periods there is an undersupply of labor in the town. Much of the year, however, there probably is a labor surplus in the sense that many farmers often have time free which they could use in some other employment were it readily available.

CAPITAL

Efforts to define capital for Cherán meet with the same difficulties that are to be met with in our own society. Money used for purchasing food ordinarily is not considered capital; yet insofar as it makes the individual capable of producing additional goods or services through which his wealth is increased, such money, or stores of food accumulated for this purpose, might be considered capital. Money accumulated to buy land for the production of food for sale or export would usually be considered capital; is the land purchased to be so considered also? In the case of Cherán, I think it is, for, although most farmers would not so regard it, a considerable number of Cherán men have bought land for the express purpose of increasing wealth, not through their own efforts, but through those of a tenant farmer.

[p.65a]

TABLE 1.—Estimates of maize yields in Cherdá—
Continued

ESTIMATE BASED ON OBSERVATIONS AT HARVEST

Type of land	Yield in fanegas per hectare	Remarks
Poor to average land.....	3	Maize badly damaged by early frost.
Average land.....	12	Maize slightly damaged by frost.

243 In addition to securing data on yield, i.e.,
 433 income, for maize, an effort was made to secure
 461 data on production costs. General statements
 as to the amount of time put in on farm work
 proved worthless. Usually the time given
 would scarcely provide for a single weeding.
 The best figures were secured by breaking
 down the different steps and getting exper-
 ienced farmers to estimate the time necessary
 for cultivating 1 hectare. A summary of such
 data gives the following:

Labor of owner:	Days
First plowing	10
Second plowing (at right angles)	10
Sowing.....	3
First cultivation (with plow).....	4
Second cultivation (with plow).....	3
First weeding (with sickle or machete).....	3
Second weeding (often omitted).....	3
Harvest.....	1
Carrying maize to house (estimated average)	5
Total	42

Hired labor:	
Sowing (2 peons).....	3
Harvesting (3 peons).....	1

Costs:

Owner's labor (42 days valued at \$0.45 a day outside of planting and harvesting time)	\$18.90
2 peons for 3 days.....	3.00
3 peons for 1 day.....	1.50
Total	\$23.40

On the assumption that a man will own sufficient land to require hired labor, the summary given above includes 9 man days of hired labor at a cost of \$4.50 or a total of 51 man days of labor worth \$23.40. To this must be added \$30 for hire of an ox team if one is not owned, probably \$1 in taxes, and \$2.50 for the value of the seed corn (one-half fanega), or a total of \$56.90. If this is about an average piece of land, the yield will be 15 to 20 fanegas of shelled

231 pig takes from 1 to $2\frac{1}{2}$ fanegas of maize to
 434 fatten, valued at from \$5 to \$7. According to
 [435] size, the animal may bring from \$30 to \$75, a
 gross profit on the fattening process of from
 \$12.50 to \$70.00. This would be 5 to 7 pesos
 less if the pig was bought. If an adequate
 market were developed, or if sales and trans-
 port facilities at a distance were to be devel-
 oped, pig raising might be a more important
 activity, although an increase in the number of
 pigs would decrease the amount of foraging
 possible and would require more feeding.

236 Sheep raising is engaged in by only a few.
 434 The reliability of the major informants is sus-
 pect, but the evidence suggests that sheep rais-
 ing is profitable. The major expense is the
 initial cost of the flock and the wages of a
 shepherd. Sheep are worth \$2.50 to \$5.00
 [435] apiece. Shepherds' wages vary with the size of
 the flock, but probably rarely exceed \$20 a
 month plus a fanega of maize and one sheep
 [465] for food; most shepherds receive considerably
 less, often only \$5 a month without food. Often
 several small owners merge their flocks and
 hire a single shepherd.

Income from sheep is mainly from wool and
 payments to have the flocks bedded on farm
 land. Sheep average a pound of wool a year
 (this seems low but the sheep are of poor
 [435] quality), which sells for \$1 to \$1.25. A fair-
 size flock of sheep would bring 50 centavos a
 night for fertilizer. A few sheep are sold for
 meat outside the village; almost no lamb or
 [262] mutton is eaten in Cherán. No data were se-
 cured on prices. Mortality on sheep is high,
 but again no usable data were obtainable.

A flock of 200 sheep studied represents an
 investment of \$750 in theory although it prob-
 ably was built up by natural increase from a
 smaller flock. The shepherd receives \$20 a
 month, 1 fanega of maize worth at least \$5, and
 a sheep worth, on an average, \$3.75, or a total
 of \$28.75 a month (\$345 a year). Wool would
 produce \$200 to \$250 a year. Bedding on farm
 lands would produce probably 50 centavos a
 night for this flock for 110 days (estimated)
 or \$55. Total income from these sources would
 be \$255 to \$305 a year. The natural increase
 may safely be assumed to be 75 head. Sold at
 \$2.50 apiece, they would bring in \$187.50 a

[A 70a]

Sierra Tarascans

313 *Plank making:*

433 *Tools:*

- 434 Oak mallet
Oak wedges
Ax
Two-handed saw

Expenses:

- Haulage (ox team, horse, or even burros)
Forest use tax (now 10 pesos for membership in cooperative)

Production (with good workmen):

- 3 dozen planks per week

Gross profits:

- \$0.85 to 1.25 per day per person

Comment: Sawing planks requires two men, hence work is done by teams. The gross profits probably are very nearly all net, as deterioration of equipment is slight. Maintaining an average income of the larger size indicated would require 6 long work days a week for the most skilled workers.

Firewood cutting:

Some men at times cut firewood for sale. A burro load brings \$0.25 to \$0.30.

Tie cutting:

Data on this subject seem unreliable and are omitted.

314 *Charcoal burning:*

433 Beyond the fact that charcoal burners work a 5-day week, no economic data were secured. The little charcoal used in Cherán is sold at 2½ to 3 centavos a kilo delivered.

395 *Carpentry:*

433 *Tools:*

- 434 Mallet, saw, chisels, hammer, ax, adz, plane;
value about \$20-\$30

Products, labor, value:

As each carpenter's job is unique, only a series of cases can be given, as follows:

- [435] (a) Large door takes 4 days (10 to 12 hours daily),
lumber cost \$4, selling price \$17, gross profit \$13,
daily return (not allowing for interest on capital,
etc.) \$4.25.
(b) Average door takes 4 days (6 to 7 hours daily)
lumber cost \$4, selling price \$12, gross profit \$8,
daily return \$2.
(c) Average door takes 6 days (but this carpenter
has rheumatism and cannot work steadily), selling
price \$5 a door if lumber is furnished, daily return
less than \$1.
(d) House building or house moving, \$1.50 daily (if
done under contract, as usual).

Comment: As only carpenters with other members in the family to get wood, do chores, look after animals, etc. can work more than 6 or 7 hours a day, probably \$2 a day is top income. Moreover, as work is not steady and as all seem eager to take house building or house moving jobs at \$1.50, it may be assumed that average wages the year around are less than \$1.50.

●[465]

322 Wood turning:

433 Equipment:

434 Lathes
 Saws
 Chisels

Product:

Chocolate beaters

Cost of materials:

No data; the small quantity of madroña wood used is probably a minor factor.

Labor:

[435]

About 25 to 30 beaters are made in a day's work. Sale price at 50 centavos per dozen.....\$1-\$1.25

Comment: Considering the costs of materials and the time involved in selling the product, returns for labor probably are under \$1 a day. Only one man in Cherán follows this trade.

MINERAL PROCESSING AND USE

Brickmaking and tilemaking:

339
 433
 434

Labor (per 1,000 tile or brick):

	Days
Getting and mixing clay.....	2
Cutting and hauling wood.....	1
Shaping.....	5
Loading kiln.....	1
Total.....	9

Other costs (in kind):

Rent of building and right to dig clay on public lands (paid to municipio), 10 percent of product value:

Tile, per 1,000.....\$3.00
 Brick, per 1,000.....3.20

Sales prices:

[435]

Tile, per 1,000.....\$30
 Brick, per 1,000.....32
 Gross profit, tile, per 1,000.....27
 Daily profit per worker.....3

Comment: While brick bring a slightly higher price, there is a greater loss in firing. Consequently, profits are about the same as for tile. The demand for brick or tile is not sufficient to employ two men full time. The wage return is hence misleading, indicating what might be possible if demand provided steady labor. The fact that both tilemakers took jobs on highway construction crews whenever possible at \$1 a day suggests that income over a long period of time is much less than is indicated. On the other hand, the tilemakers probably average a higher annual income than do unskilled landless farm laborers in Cherán.

[465]

Masonry:

333
 433
 434

Equipment:

Trowel ("cuchara")
 Short shovel
 ½-pound iron mallet ("marro," maso)
 2-pound sledge with pointed ends ("picadera")

435 exceptions, it may perhaps fairly be said that prices are the expression of Cherán values with respect to goods and services. Moreover, the major price determination at Cherán is not by local standards but in terms of fluctuations in Mexican economy as a whole. It is not supply and demand in Cherán which determines most prices, but supply and demand (and Government controls) in the surrounding regions. The extent to which this is true is a measure of the degree to which Tarascan economy is linked with that of Mexico, a relationship that is much closer than is ordinarily recognized by Mexican students.

[17]

The prices of the most important commodities produced in Cherán, corn and wheat, are determined by what will be paid by purchasers from outside the town. In similar fashion, the prices of most imported goods are determined by the wholesale prices existing in centers such as Uruapan, Purépero, and Pátzcuaro. The price of labor is likewise determined, although to a somewhat lesser degree, by the price labor can command in markets outside of Tarascan territory.

It is interesting to observe, however, that this influence does not extend far out of Michoacán. The Government, in building the highway with local labor, is reported to have paid only a peso a day, somewhat less than the legal minimum wage. As it was, the high wages (by Michoacán standards) tended to disrupt the local wage structure.

[465]

Within this major framework of price determination, of course, there are subsidiary exceptions. The price of pears, for example, will fluctuate somewhat in relation to local supply and demand, and the same is true of other fruits which have not yet found wider markets. Similar conditions obtain with respect to cheese and fish. Land prices in general seem to bear little relation to productivity and yield, although here our analysis may be at fault.²⁸ The preference for exercising gleaning rights in the corn harvest in place of higher wages also shows that in some areas of Cherán economics, nonmonetary values operate.

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178
494 In general, the coming of the highway is bringing higher prices for local products.

²⁸ It is possible that a more adequate analysis of labor costs might show our estimates of net yields from farming are too high.

668 of stealing because it distributed the haciendas, it does not propagandize a return to the old order. It is supported by small farmers and even ejidatarios dissatisfied with the course of the land reforms. It promises the ejidatarios to rid them of the new bosses born of the Revolution and to give them as outright private property their ejido plots which now are ultimately owned by the State.

668 Since the late 'thirties, the period when
 465 land reforms were more or less completed, the real wages in the countryside have been in decline" due mainly to wartime inflation. This fact together with the inability of the government to provide agricultural credit indicates the difficult situation of the countryside and explains the rapid growth of a protest movement like sinarquismo."

669 The opposition to the agraristas and to the government which had arisen in many Tarascan towns has lately merged with sinarquismo. Sinarquista units function in many villages and many Tarascans are members of the party.

423 In the present situation, with the agrarian revolt receded, the Indian village communities, although greatly impaired, show
 181 a persistence of an economic foundation which is the basis for the survival of the

81. Whetten, 1945, 252.

82. Gill, 1944; Padilla, 1945; Whetten, 1945, 252-253.

335 In the Sierra, a master carpenter is usually
 465 employed on a contract basis. Often the carpenter
 employs a helper. In addition to their pay, the
 carpenter and helper are given their food. Adobe
 or stone structures are also built under contract,
 but in this case the workmen are not fed.

PRELIMINARY NOTES ON THE DISTRIBUTION OF TYPES

341 known distribution of types within Tarascan
 184 boundaries:

<i>Mostly wood</i>	<i>Mostly masonry-adobe</i>	<i>All masonry-adobe</i>
Ahuiran	Cuanajo	Cucuchucho
Angahuan	La Cañada (all towns)	Huecorio
Arantepakua	Puscuaro *	Ihuatzio
Aranza	Tarecuato	Janicho
Capacuaro	Uruapan *	Jaracuaro *
Charapan	Zacápu *	Naranja
Cherán	Zamora *	Pareo
Cocucho		Pátscuaro *
Corupo		Quiroga
Nahuatsen		Santa Fé
Nurió		Tarejero
-Paracho		Tecuena
Parangaricutiro		Tirindaro
Paricutin		Tsentsénhuaro
Patamban		Tsurumítaro
Pomacuacán		Yunuán
Quinseo		
San Felipe		
San Lorenzo		
Sevina		
Tucutacato		
Tingüindin		
Urapicho		
Zirosto		

* Indicates Mestizo town showing influence of styles.

* Indicates shake roofs common.

[p.21b]